

IN THE CLAIMS

Please amend the claims to read as follows:

Listing of Claims

1. (Currently Amended) A reception quality notifying method comprising:

~~a reception step of~~ receiving a multicarrier signal;

~~a measurement step of~~ measuring reception quality of the multicarrier signal on a subcarrier basis;

~~a generation step of~~ comparing the measured reception quality of measurement result of the measurement step on each subcarrier of the multicarrier signal, with a predetermined threshold value; and

performing format conversion on the comparison result, using a plurality of different references, to generate a plurality of reception quality data that have different formats and that are expressed by bits, the plurality of reception quality data including first reception quality data in which the comparison result is expressed by bits in ascending order of subcarrier numbers of subcarriers constituting the multicarrier signal, and at least one of second reception quality data in which subcarrier numbers of subcarriers with reception quality greater than or equal to the threshold value are expressed by bits based on the comparison result and third reception quality data in which subcarrier numbers of subcarriers with reception quality less than the threshold value are expressed by bits based on the comparison result;

~~a selection step of~~ selecting reception quality data with a smallest data amount, from the plurality of generated reception quality data; and

~~a transmission step of~~ transmitting the selected reception quality data.

2. (Cancelled)

3. (Currently Amended) The reception quality notifying method according to claim 1, wherein the plurality of reception quality data ~~generated in the generation step~~ include the first reception quality data ~~in which the comparison result is expressed by bits in ascending order of subcarrier numbers of subcarriers constituting the multicarrier signal~~, and the second reception quality data ~~in which subcarrier numbers of subcarriers with reception quality more than or equal to the threshold value are expressed by bits based on the comparison result~~, and

further comprising: ~~a threshold value adjustment step of increasing the threshold value in the generation step when the number of other radio communication terminal apparatuses that perform communication using the multicarrier signal increases, and decreasing the threshold value when the number of the other radio communication terminal apparatuses decreases.~~

4. (Currently Amended) The reception quality notifying method according to claim 1, wherein the plurality of reception quality data ~~generated in the generation step~~ include the first reception quality data ~~in which the comparison result is expressed by bits in ascending order of subcarrier numbers of subcarriers constituting the multicarrier signal~~, the second reception quality data ~~in which subcarrier numbers of subcarriers with reception quality more than or equal to the threshold value are expressed by bits based on the comparison result~~, and the third reception quality data ~~in which subcarrier numbers of subcarriers with reception quality less than the threshold value are expressed by bits based on the comparison result~~; and

further comprising: ~~a threshold value adjustment step of increasing the threshold value in the generation step~~ when the number of other radio communication terminal apparatuses that perform communication using the multicarrier signal increases, and decreasing the threshold value when the number of the other radio transmission apparatuses decreases.

5. (Currently Amended) The reception quality notifying method according to claim 1 [[2]], wherein the first reception quality data, the second reception quality data or the third reception quality data is provided with a different identification number expressed by bits in at least one of a beginning part and a last part.

6-9. (Cancelled)

10. (Currently Amended) A radio communication terminal apparatus comprising:
a receiver that receives a downlink multicarrier signal;
a measurer that measures reception quality of the downlink multicarrier signal on a subcarrier basis;
a generator that compares the measured reception quality of measurement result of the measurer on each subcarrier of the multicarrier signal, with a predetermined threshold value, and performs format conversion on the comparison result, using a plurality of different references, to generate a plurality of reception quality data that have different formats and that are expressed by bits, the plurality of reception quality data generated by the generator including first reception quality data in which the comparison result is expressed by bits in ascending order of subcarrier number of subcarriers constituting the multicarrier signal, and at least one of second reception

quality data in which subcarrier numbers of subcarriers with reception quality greater than or equal to the threshold value are expressed by bits based on the comparison result and third reception quality data in which subcarrier numbers of subcarriers with reception quality less than the threshold value are expressed by bits based on the comparison result;

a selector that selects reception quality data with a smallest data amount from the plurality of generated reception quality data; and

a transmitter that transmits an uplink multicarrier signal including the selected reception quality data.

11. (Currently Amended) A base station apparatus that performs radio communication with the radio communication terminal apparatus according to claim 10, comprising:

a transmitter that transmits downlink multicarrier signals to a plurality of radio communication terminal apparatuses;

a receiver that receives uplink multicarrier signals including reception quality data indicating reception quality of the downlink multicarrier signals transmitted from the plurality of radio communication terminal apparatuses;

a determiner that determines formats of the reception quality data included in the uplink multicarrier signals for each of the plurality of radio communication terminal apparatuses, wherein the formats include a format of first reception quality data in which the comparison result is expressed by bits in ascending order of subcarrier number of subcarriers constituting the multicarrier signal, a format of second reception quality data in which subcarrier numbers of subcarriers with reception quality greater than or equal to the threshold value are expressed by bits based on the comparison result, and a format of third reception quality data in which

subcarrier numbers of subcarriers with reception quality less than the threshold value are expressed by bits based on the comparison result; and

an assignment determiner that determines respective subcarriers to be assigned to the plurality of radio communication terminal apparatuses in accordance with the determined formats.

12-13. (Cancelled)

14. (Currently Amended) The radio communication terminal apparatus according to claim 10, wherein the plurality of reception quality data generated by the generator include the first reception quality data ~~in which the comparison result is expressed by bits in ascending order of subcarrier number of subcarriers constituting the multicarrier signal~~, and the second reception quality data ~~in which subcarrier numbers of subcarriers with reception quality more than or equal to the threshold value are expressed by bits based on the comparison result~~, and

further comprising a threshold value adjuster that increases the threshold value in the generator when the number of other radio communication terminal apparatuses that perform communication using the multicarrier signal increases, and decreases the threshold value when the number of the other radio communication terminal apparatuses decreases.

15. (Currently Amended) The radio communication terminal apparatus according to claim 10, wherein the plurality of reception quality data generated by the generator include the first reception quality data ~~in which the comparison result is expressed by bits in ascending order of subcarrier number of subcarriers constituting the multicarrier signal~~, the second reception

~~quality data in which subcarrier numbers of subcarriers with reception quality more than or equal to the threshold value are expressed by bits based on the comparison result, and the third reception quality data in which subcarrier numbers of subcarriers with reception quality less than the threshold value are expressed by bits based on the comparison result; and~~

further comprising a threshold value adjuster that increases the threshold value in the generator when the number of other radio communication terminal apparatuses that perform communication using the multicarrier signal increases, and decreases the threshold value when the number of the other radio transmission apparatuses decreases.

16. (Currently Amended) The radio communication terminal apparatus according to claim 10 [[13]], wherein the first reception quality data, the second reception quality data or the third reception quality data is provided with a different identification number expressed by bits in at least one of a beginning part and a last part.

17. (New) A subcarrier assignment method comprising:

transmitting downlink multicarrier signals to a plurality of radio communication terminal apparatuses;

receiving uplink multicarrier signals including reception quality data indicating reception quality of the downlink multicarrier signals transmitted from the plurality of radio communication terminal apparatuses;

determining formats of the reception quality data included in the uplink multicarrier signals for each of the plurality of radio communication terminal apparatuses, wherein the formats include a format of first reception quality data in which the comparison result is

expressed by bits in ascending order of subcarrier number of subcarriers constituting the multicarrier signal, a format of second reception quality data in which subcarrier numbers of subcarriers with reception quality greater than or equal to the threshold value are expressed by bits based on the comparison result, and a format of third reception quality data in which subcarrier numbers of subcarriers with reception quality less than the threshold value are expressed by bits based on the comparison result; and

determining respective subcarriers to be assigned to the plurality of radio communication terminal apparatuses in accordance with the determined formats.